



## SALEEN SPEEDLAB SUSPENSION KIT



**INSTALLATION MANUAL: 2005 Mustang**

**P/N: 10-8002-C11790A**

**SALEEN**

Saleen Performance, Inc. 76 Fairbanks Irvine, CA 92618 949-597-4900  
[www.saleen.com](http://www.saleen.com)



***IF YOU ARE NOT EXPERIENCED IN THE  
AREA OF AUTOMOTIVE MECHANICS, WE  
STRONGLY URGE THAT YOU REFER THIS  
INSTALLATION TO A CERTIFIED INSTALLER  
OR TECHNICIAN***



## **Saleen Speedlab Suspension Kit Installation Guide for 2005 Mustang**

**WELCOME!**

Thank you for buying the Saleen Speedlab Suspension Kit for the 2005 Mustang. We appreciate your business, and we hope you enjoy your product.

For your benefit, please read the following instructions completely and thoroughly before attempting to install the suspension kit. Many questions we have received from customers about the installation of our products could have been easily solved by information listed in the accompanying installation guide. We want you to enjoy the product in its fully functional state, and reading this tutorial is a great first step to getting you on your way to a more rare and better handling Mustang.

**NOTE:** Please keep all hardware you remove from your stock Mustang, as much of it will be reused to install the new suspension kit pieces.

Please take caution in installing this kit; the car will be up on jack stands and the car can fall and cause serious injury if not properly placed on jack stands.

Again, thank you for choosing Saleen!



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**OBTAIN THE FOLLOWING TOOLS:**

- Spring compressor
- 10 mm wrench
- ¼" wrench
- ½" drive Ft-lb torque wrench
- ½" drive impact gun
- ½" drive 13/16" deep socket
- ½" drive 13mm deep socket
- ½" drive 15mm deep socket
- ½" drive 15 mm shallow wobbly socket
- ½" drive 18mm deep socket
- ½" drive 21 mm deep socket
- 3/8" drive impact gun
- 3/8" drive 10mm socket
- 3/8" drive 13mm deep socket
- 3/8" drive 15mm deep socket
- 3/8" drive 15 mm shallow wobbly socket
- 3/8" drive 18mm deep socket
- Tape measure
- Grease
- Small flat head screw driver
- Needle nose pliers
- Hack saw
- Polyurethane grease intended for automotive application



The following table lists the proper torque values to follow when fastening all suspension components; note also the recommendations for the use of Loctite in the last column.

<b>Saleen Chassis Fasteners and Torques</b>										
Ref Number	(B)olt (N)ut (F)itting	Qty	Joint description	Min Spec Torque (Nm)	Nom Spec Torque (Nm)	Max Spec Torque (Nm)	Min Spec Torque (lbf-ft)	Nom Spec Torque (lbf-ft)	Max Spec Torque (lbf-ft)	Loctite (L) Nilock (N) MechLck (M) DefNut (D) Plain (P)
1	N	2	front strut to mount	53.1	<b>62.5</b>	71.9	39.2	<b>46.1</b>	53.0	N
2	N	8	front strut mount to body	29.7	<b>35</b>	40.3	21.9	<b>25.8</b>	29.7	P
3	N	2	Linkage to strut	97.7	<b>115</b>	132.3	72.1	<b>84.8</b>	97.6	N
4	B	4	knuckle to strut	170	<b>200</b>	230	125.4	<b>147.5</b>	169.6	P
5	N	2	sta-bar to linkage	97.7	<b>115</b>	132.3	72.1	<b>84.8</b>	97.6	N
6	N	4	sta-bar brackets to #1 x-member	59.5	<b>70</b>	80.5	43.9	<b>51.6</b>	59.4	P
7	N	2	rear shock to body	34	<b>40</b>	46	25.1	<b>29.5</b>	33.9	P
8	B	2	rear shock to rear axle <i>Torque at Ride Height</i>	97.7	<b>115</b>	132.3	72.1	<b>84.8</b>	97.6	N
9	B	2	CAPSCRW SCKT HD M12x1.75x75mm ST	103	<b>130</b>	155	76.0	<b>95.9</b>	114.3	L
10	B	2	front caliper mounting bolt	87.5	<b>103</b>	118.5	64.5	<b>76.0</b>	87.4	L
11	B	4	jounce bumper brkt to axle	28	<b>30</b>	32	20.7	<b>22.1</b>	23.6	P
12	N	20	Lug Nuts	113	<b>133</b>	153	83.3	<b>98.1</b>	112.8	P
13	N	4	Rear Stabilizer Bar to Axle	59.5	<b>70</b>	80.5	43.9	<b>51.6</b>	59.4	P
14	B	2	Rear Stabar Link to Body	97.7	<b>115</b>	132.3	72.1	<b>84.8</b>	97.6	N



## I Wheel Removal

### Obtain the following tools:

- 13/16" deep socket, 1/2" drive
- 1/2" impact gun

### Order of Operations:

1. Jack up the front of the car, and place jack stands underneath the chassis members.
2. Lower the car onto the jack stands. The car should stay in this position for the entire front suspension replacement.
3. Remove five 13/16" nuts using the 1/2" air gun and 13/16" deep socket. (Figure 1) Be careful when you remove the last nut, as the wheel could fall off.
4. Remove wheel; repeat on other side of car.



Figure 1

## II Front Struts Removal

### Obtain the following tools:

- ½" drive impact gun
- 13/16" deep socket, ½" drive
- 3/8" drive impact gun
- 15mm deep socket, 3/8" drive
- 18mm deep socket, 3/8" drive
- 13mm deep socket, 3/8" drive
- 10mm socket, 3/8" drive

### Order of Operations:

**NOTE: Keep ALL hardware for installation of new suspension components.**

1. Remove the two lower strut bolts using a 3/8" impact gun with a 18mm deep socket. (Figures 1 and 2)
2. Unbolt the end link from the strut using the 3/8" impact gun with the 18mm socket. (Figure 3)

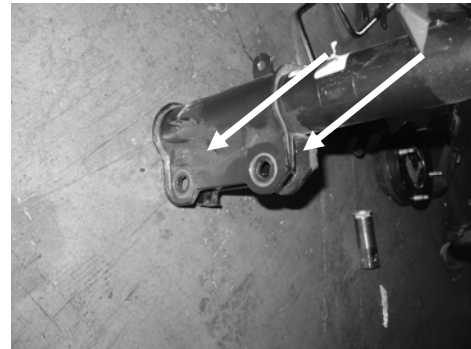


Figure 1

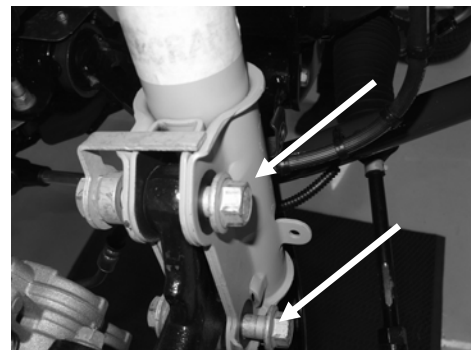


Figure 2

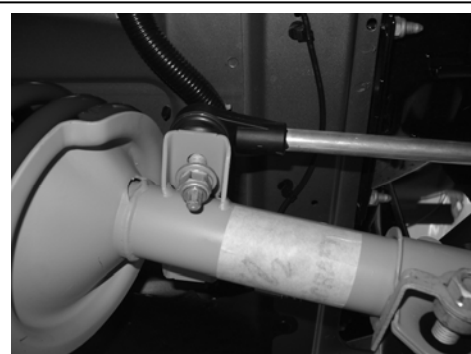


Figure 3



3. Unbolt the brake line from the strut using the 3/8" impact with the 10mm socket. Remove the Christmas tree that holds the ABS line in place. (Figure 4)
4. Using the 13 mm deep socket and 3/8" drive impact gun, remove the nuts from the four upper strut bolts (in the engine bay). (Figure 5)
5. Carefully maneuver the strut out of the wheel well so that it does not hit the brake lines.
6. Keep the strut; you will need parts of it to complete the assembly of the new front strut.
7. Repeat steps 1 – 6 to remove the front strut from the other side of the car.



Figure 4

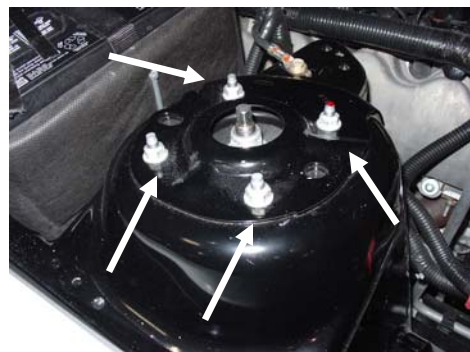


Figure 5



### III Front Sway Bar Removal

**Obtain the following tools:**

- 3/8" drive impact gun
- 15mm socket, 3/8" drive
- 18mm socket, 3/8" drive

**Order of Operations:**

**NOTE: Keep all hardware for installation of new suspension components.**

1. Remove the bolt that connects the sway bar to each end link using a 3/8" impact gun with the 18mm socket. (Figure 1)
2. Remove the four bolts under the chassis holding the sway bar bushings brackets in place. Use a 3/8" impact gun with a 15mm socket. (Figure 2)
3. Remove stock front sway bar.



Figure 1



Figure 2



#### IV Front Strut Subassembly

Part Number	Description	Qty.
06-1302-C09816a	Strut Front Coupe	2
06-1302-C09731a	Spring Front Coupe	2

**Obtain the following tools:**

- ½” drive impact
- 1/2” drive 21 mm deep socket
- Spring compressor
- Hack saw
- Ft-Lb Torque Wrench, ½” drive

**Order of Operations:**

**NOTE: THE FOLLOWING OPERATION IS DANGEROUS. IF YOU HAVE NOT SUCCESSFULLY COMPLETED THE SUBASSEMBLY OF A STRUT BEFORE, LEAVE THE SUBASSEMBLY TO A PROFESSIONAL.**

1. Place the stock strut in the spring compressor. Place the bottom end of spring on the three lower clamps, making sure to tilt it toward the rear enough to place the impact wrench and 21 mm socket onto the central nut on top of the strut assembly. (Figure 1)
2. Remove the 21mm nut and the strut cap from the top of the stock strut. Be careful when you remove the bolt; sometimes the shock and spring will fall to the ground. (Figure 2)

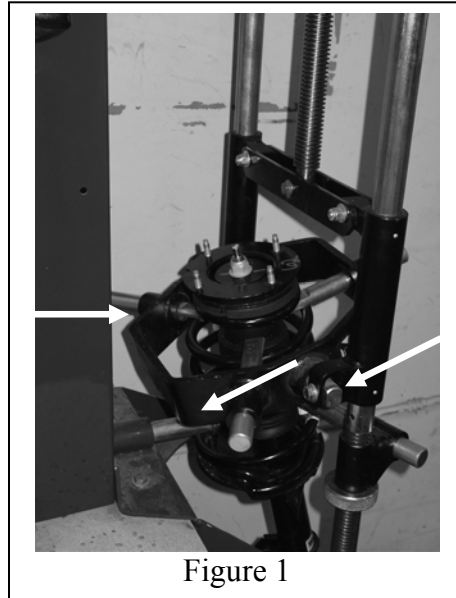


Figure 1



Figure 2

4. Obtain the bump stop from the stock strut, and cut it with a hack saw at the line shown in Figure 3 (bump stop on the right in Figure 3 is before, and the one on the left after, the cut has been made).
5. Obtain the new shock and spring. Place modified bump stop over the shock (Figure 2).
6. Cover the new spring with the rubber boot. Place the spring over the new shock - NOTE ORIENTATION IN FIGURE 2 - and cover with the stock cap (Figure 2). Place this assembly in the spring compressor as you did for the stock strut. (Figure 3)
7. Align the notch on the cap with the bolt holes at the bottom of the strut. (Figure 4)
8. Compress the Saleen Racecraft strut assembly.
9. Apply a dab of red Loctite to the threads of the center stud. Use the stock 21mm nut to tighten the cap on to the new tower. (Figure 5) There should be at least a few threads above the nut when the strut is fully tightened. **Torque center strut nut to 46 ft-lbs.**

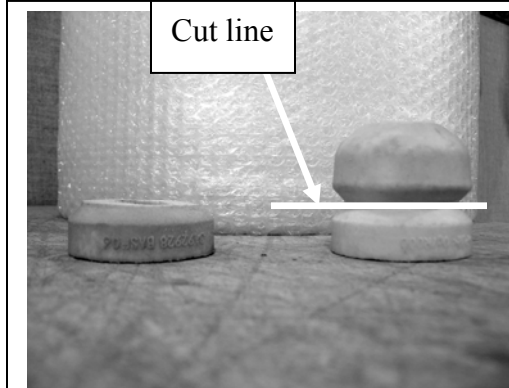


Figure 3

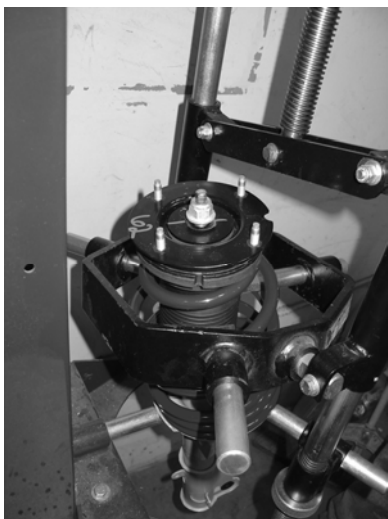


Figure 4

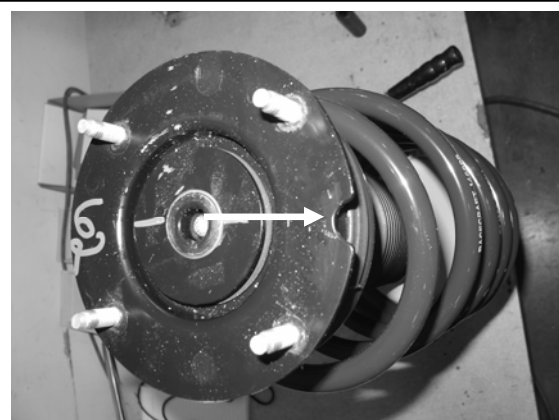


Figure 5



**V Front and Rear Shock Decal Installation**

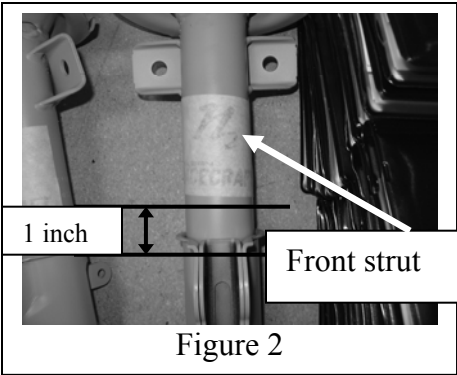
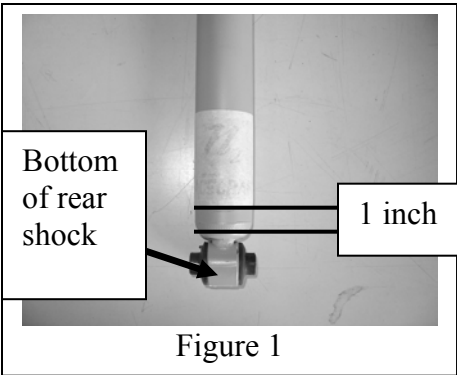
Part Number	Description	Qty.
06-1302-C09816	Strut Front Coupe	2
06-1302-B09916*	Shock Rear Coupe	2
06-9101-C10227	Decal Shock N2 Racecraft	4

**Obtain the following tools:**

- Tape measure

**Order of Operations:**

1. Take the shock, position it as shown in Figure 1, and place the logo as seen, one inch from the bottom of the shock.
2. The front strut decal needs to be one inch off the top of the lower bolt holes. (Figure 2)



## VI Front Struts Installation

Part Number	Description	Qty.
06-1302-B09913*	Strut Front Assembly Coupe	2

### Obtain the following tools:

- ½” impact gun
- 18mm deep socket, ½” drive
- 3/8” impact gun
- 18mm deep socket, 3/8” drive
- ¼” air wrench
- 13 mm deep socket, 1/4” drive
- 13 mm deep socket, ½” drive
- 10 mm deep socket, ¼” drive
- Ft-Lb torque wrench, ½” drive

### Order of Operations:

1. With notch facing outside of the vehicle, slide studs in top of strut into four upper mounting holes; be sure the brake line sits behind strut assembly before tightening the strut in place. (Figure 1)
2. Use a 13mm deep socket with the 3/8” impact gun to tighten a nut over each of the four studs (Figure 5, p. 8). **Torque to 26 ft.-lbs.**
3. Pull up wheel hub and attach the bottom of the strut to the knuckle using stock bolts and nuts. Use the 3/8” impact gun and 18 mm deep socket to tighten (Figure 2). **Torque to 148 ft.-lbs.**
4. Put the sway bar end link stud into rear most hole on strut tower, tighten using a ½” impact gun with a 18mm deep socket. (Figure 3) **Torque to 85 ft.-lbs.**
5. Bolt brake line to rear of strut tower using 10mm socket and 3/8” impact gun. (Figure 5)

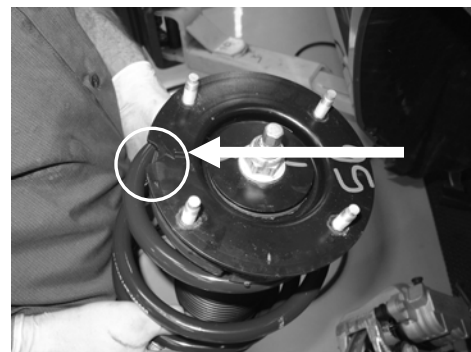


Figure 1

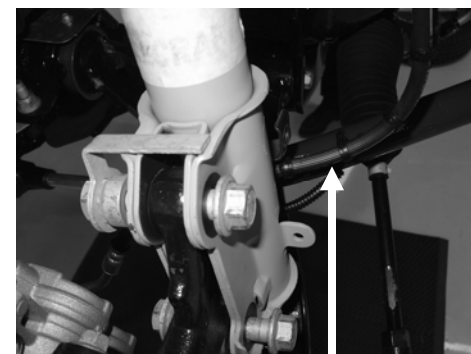


Figure 2

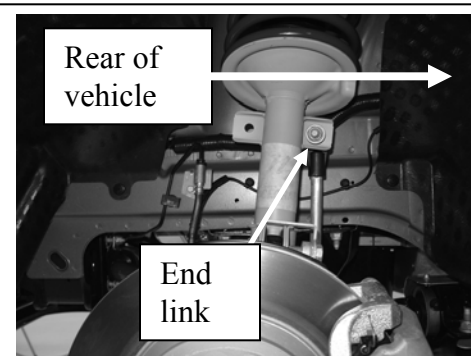


Figure 3

## VII Front Sway Bar Subassembly

Part Number	Description	Qty.
06-1303-C09503	Swaybar Front	1
00-1303-C09515*	Bushing Swaybar Front	2
00-1303-C09932*	Bracket Bushing Swaybar Front	2

### Obtain the following tools:

- Polyurethane grease intended for automotive application

### Order of Operations:

1. Grease the bushings. (Figures 1 and 2)
2. Push bushings in towards the idle of the sway bar until they hit the outside of the flange. (Figure 3)
3. Place the bracket with the zert fitting over the bushing and push until the bracket lies flush with the flat end of the bushing (Figure 4).



Figure 1

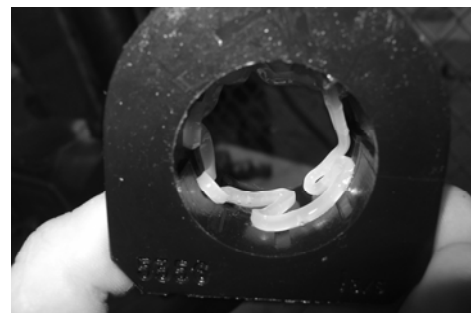


Figure 2

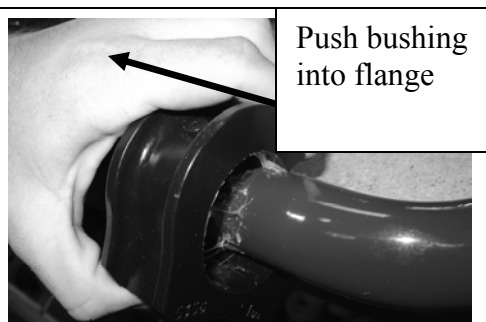


Figure 3



Figure 4

## VIII Front Sway Bar Installation

Part Number	Description	Qty.
06-1303-B09915*	Swaybar Front Assembly	1

### Obtain the following tools:

- 3/8" impact gun
- 15 mm deep socket, 3/8" drive
- 18 mm deep socket, 3/8" drive
- Ft-lb torque wrench, 1/2" drive
- 15 mm deep socket, 1/2" drive
- 18 mm deep socket, 1/2" drive

### Order of Operations:

1. Put the new sway bar into the location where the stock sway bar went.
2. Align the bushing brackets over the existing studs. (Figure 2)
3. Fasten down the new sway bar using the stock nuts over the inboard studs and new bushings brackets. There are a total of four nuts. Use a 3/8" impact gun with a 15 mm socket. (Figure 2) **Torque nuts to 52 ft-lbs.**
4. Attach the ends of the sway bar to the bottom of the end links, and put the stock nut in place over each bottom end link stud. Tighten nut using the 3/8" impact gun and 18 mm deep socket. **Torque nuts to 85 ft-lbs.**
5. Remove the white cover from the front strut decals.
6. Jack the front of the car up, remove the jack stands, and lower the car back to ride height.

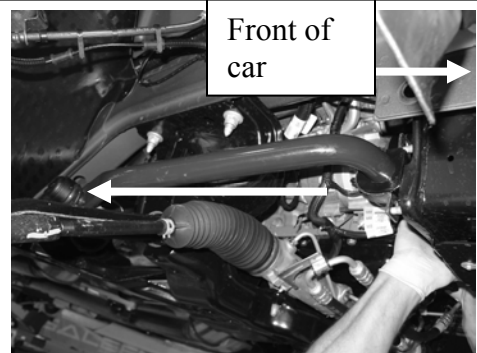


Figure 1

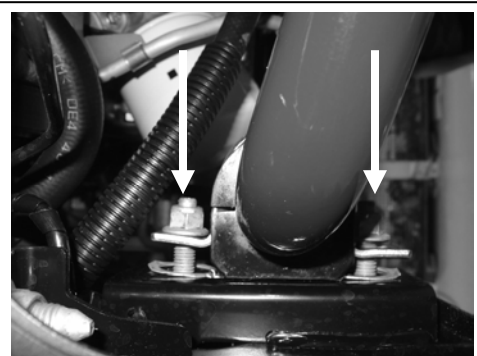


Figure 2



## IX Rear Suspension Removal

### Obtain the following tools:

- ½" drive impact gun
- 13/16" deep socket, ½ " drive
- 3/8" Impact gun
- 15mm short wobbly socket, 3/8" drive
- ¼" wrench

### Order of Operations:

**NOTE: Keep ALL hardware and rubber spring boots for installation of new suspension components.**

1. Jack up the rear of the car and place jack stands under the chassis members near the rear suspension.
2. Lower the car onto the jack stands and make sure the car is secure.
3. Remove rear wheels using the ½" impact gun with a 13/16" socket.
4. Remove two rear sway bar connections that are near the lower shock mounting points using a 3/8" impact gun with a 15mm socket. (Figure 1)
5. Remove lower shock bolt, one per shock, using a 3/8" impact gun with a 15mm socket. (Figure 1)

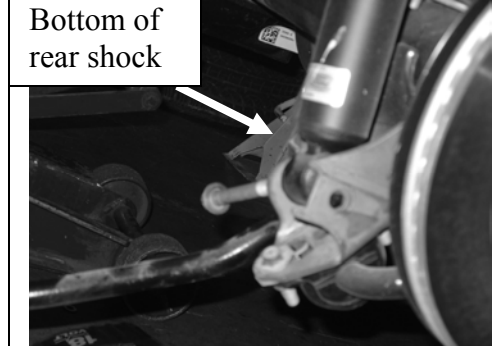


Figure 1

6. Let the axle hang. Note the orientation of the rear springs, how there is a shortened vertical distance between each of the coils at the top of the spring.
7. Work the springs out of place. Pop the bottom end toward the front of the vehicle, and pull the spring out. (Figure 2)
8. In the trunk, pull back the forward corners of the trunk liner to expose the top of the shock mounts. Use a 3/8" impact gun with a 15mm deep socket to remove the nut atop the strut. The strut should fall out if the wheels are off the ground. (Figures 3,4) If the nut won't come off the top of the shock because the shock is rotating with the impact gun, place more weight on the bottom of the shock/wheel hub.



Figure 2

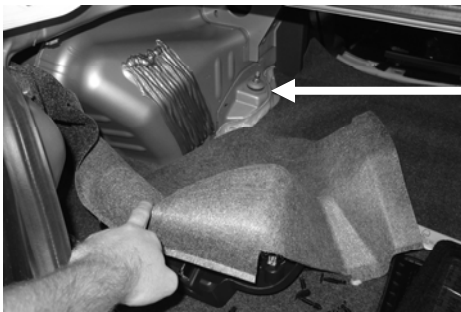


Figure 3

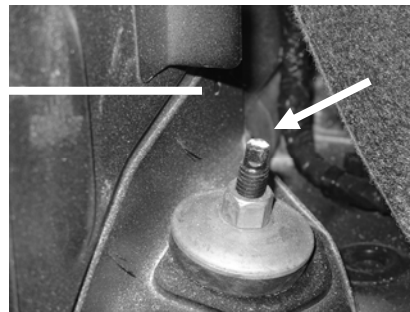


Figure 4

## X Rear Suspension Installation

Part Number	Description	Qty.
06-1302-C09818	Shock Rear Coupe	2
06-1302-C09819	Spring Rear Coupe	2

### Obtain the following tools:

- 3/8" impact socket
- 15 mm shallow wobbly socket, 3/8" drive
- Small flat head screw driver
- Needle nose pliers
- 13/16 deep socket, 1/2" drive
- 10 mm wrench
- Hack saw
- Ft-lb torque wrench, 1/2" drive



Figure 1

### Order of Operations:

1. Place the top of the spring (the end with the shorter vertical distance between coils) into the mounting location, making sure the stock rubber boot is in place. The top of the spring has shortened vertical distances between the coils. Install both springs before next step. Make sure to use the stock rubber boots on top and bottom of the springs. (Figure 1)
2. Put the bottom of the shock into the bolting location. With the top lined up with the trunk hole, tighten bottom of shock. Decal faces rear fascia. Use a 15 mm socket with a 3/8" impact gun. (Figure 2) Repeat on other side.
3. Remove the white cover from the shock decal.

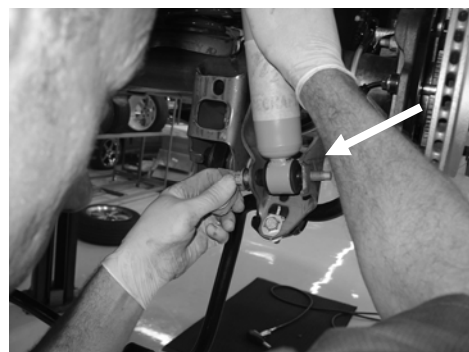


Figure 2

4. The bump stop has to be modified. Figure 3 shows the unmodified bump stop with the proper cut line, and Figure 4 shows the modified bump stop.
5. With a hack saw, cut both rear bump stops at the cut line, in the bottom of the two rings in the bump stop molding.
6. Reinstall the stock sway bar. Fasten the two 15 mm stock bolts and nuts with a 3/8" impact gun. (Figure 5)  
**Torque nuts to 52 ft-lbs.**
7. Use the stock nuts and rubber hats to fasten the top of shock to the mounting point in the interior of trunk. Use the 15mm wobbly socket with a 3/8" impact gun. (Figure 6)  
**Torque nuts to 30 ft-lbs.**
8. **Torque the bolts at the bottom of each shock to 85 ft-lbs, with the wheel hub at ride height.**
9. Replace the wheels, **torque the lug nuts to 98 ft-lbs**, and remove the jack stands.

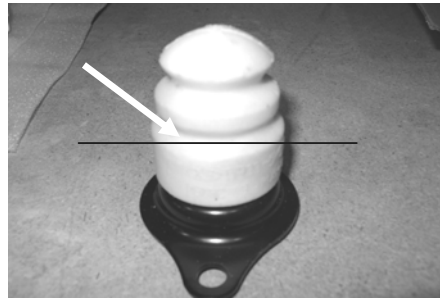


Figure 3



Figure 4



Figure 5

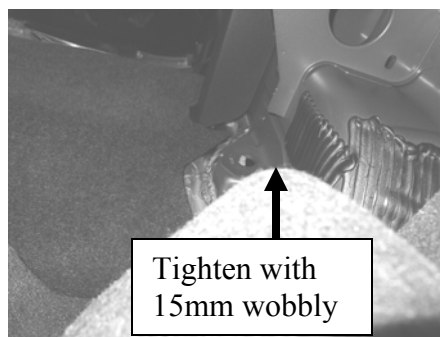


Figure 6